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PATENT
38-21(10525)A

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF

Robert T. FRALEY et al.

SERIAL NUMBER: 07/625,637

FILED: December 07, 1990

TITLE: CHIMERIC GENES FOR TRANSFORMING PLANT CELLS USING VIRAL PROMOTERS

GROUP ART UNIT: 1804

EXAMINER: D. Fox

February 3, 1992

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington D.C., 20231 on February 3, 1992
Lawrence M. Lavin, Jr.
Registration No. 30,768
Date: 2/3/92

INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. § 1.97 and 1.98

Commissioner of Patents and Trademarks
Washington, D. C. 20231

Sir:

In further compliance with the duty of disclosure under 37 C.F.R. §1.56, it is respectfully requested that this Information Disclosure Statement be entered and the documents listed on attached Form PTO-1449 be considered by the Examiner and made of record.

The attached documents, which are discussed below, are part of numerous documents cited in an opposition to the European patent application corresponding to the present application. These oppositions were not received until January, 1992. Copies of the European patent application (EPA 0 131 623)

and the listing of all the documents cited by the seven opponents is included with this Information disclosure statement. The most pertinent documents are believed to be cited specifically below.

In accordance with 37 C.F.R. §1.97(b), this Information Disclosure Statement is not to be construed as a representation that a search has been made or that no other possible material information as defined in 37 C.F.R. §1.56(a) exists.

The comments contained in this Information Disclosure Statement are believed to constitute a concise explanation of the relevance of each of the listed document to the invention claimed in the present application. 37 C.F.R. § 1.98(a). These comments, however, are not intended to take the place of the Examiner's complete consideration of each listed documents.

Applicant wishes to make the Examiner aware of the Information disclosure statements filed on April 18, 1983, July 18, 1983 and March 5, 1985 in U.S. Serial No. 458,414, filed January 17, 1983. An Information disclosure statement was also submitted on February 3, 1984 in U.S. Serial No. 485, 568, filed April 15, 1983. Copy of these earlier statements are submitted with this statement.

I. EPA 0116718

This document, which is not prior art, but has a European filing date earlier than the filing date of the priority documents to the present application, discloses the introduction of expressible genes into plant cell genomes using Ti plasmids of *Agrobacterium*.

II. Colbere-Garapin et al, "A New Dominant Hybrid Selective Marker for Higher Eukaryotic Cells, J. Mol. Biol., Vol. 150, p. 1-14

This document discloses linking the promoter region of *Herpes simplex* virus type I thymidine kinase gene to the gene coding for NPTII for expression in a mammalian host.

III. Guilley et al., "Transcription of Cauliflower Mosaic virus DNA: Detection of Promoter Sequences, and Characterization of Transcripts," Cell, Vol. 30, p. 763-773

This document discloses CaMV promoter for use in animal cells. The document states that CaMV is a "potential vector for the introduction of foreign DNA into plants."

IV. Condit et al., Miami Winter Symposium, January 17-21, 1983

This abstract discloses that CaMV is a potential vector for the introduction of foreign DNA into plants.

V. Howell et al., "Cloned Cauliflower Mosaic Virus DNA Infects Turnips (Brassoca rapa)," Science, Vol. 208, pp 1265-1267 (1980).

This article discloses that CaMV DNA cloned into a plasmid can infect plants after being excised from the plasmid.

VI. McKnight et al., "Isolation and Mapping of Small Cauliflower Mosaic Virus DNA Fragments in Escherichia coli," Journal of Virology, Vol. 37, No. 2, pp 673-682 (1981) (Abstract only).

This document discloses regions in CaMV which promote tetracycline resistance genes in *E. coli.*

VII. Gardner, R.C., "Plant viral vectors: CaMV as an experimental tool," "Genetic engineering of plants, an agricultural perspective," Proceedings of a Symposium held August 15-19, 1982 at the University of California, Davis, California, Kusuge et al., Ed., pp 124-125, 128 and 138.

This document discloses that plant viruses may be useful in developing plant vectors.

VIII. Leemans et al., "Ti Plasmids and Directed Genetic Engineering," Molecular Biology of Plant Tumors, 1982, p. 537-545.

This document suggests that it is possible to insert coding sequences into Ti plasmids and have them expressed. It also discloses the insertion of a methotrexate resistance gene in the NOS locus and suggests transcription of that gene at low levels.

IX. Hohn et al., "Cauliflower Mosaic Virus on Its Way to Becoming a Useful Plant Vector," Current Topics in Microbiology and Immunology, Vol. 96, 1982, pp 193-236

This document discloses CaMV and discusses its potential use as a plant vector.

X. Lebeurier et al., "Infectivities of native and cloned DNA of cauliflower mosaic virus," Gene, Vol. 12, 1980, p. 139-146.

This document discusses CaMV and which portions of the DNA is infective in plants

XI. Davey et al., Conference paper from University of Nottingham, 1982, Derwent Abstract 028990, DBA Accession No: 84-12265

This abstract discloses that CaMV may be used in plant cell transformation.

Finally, the Examiner is requested to note that some documents submitted with this statement may have publication dates less than one (1) year earlier than the earliest filing date to which this application is entitled. Inclusion of a

document in this statement is not intended to and does not constitute an admission that any such document is prior art with respect to the present invention.

Respectfully submitted,

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